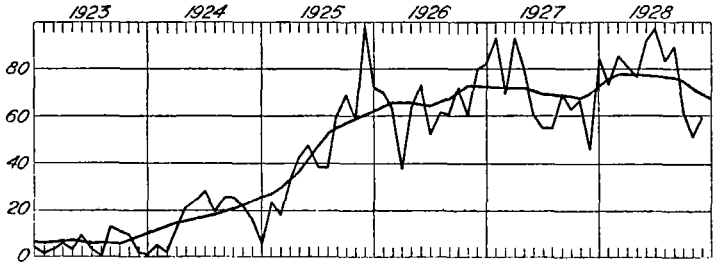
SMOOTHED MONTHLY MEANS OF SUN-SPOT RELATIVE NUMBERS, 1920–1929, INCLUSIVE [1]

[Furnished through the courtesy of Prof. W. Brunner, who made the observations and computations]

[Federal Astronomical Observatory, Zurich, Switzerland, January, 30, 1930]

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1920	46.8	43.2	40.3	39.4	38.7	37.9	36.8	34.9	32.1	31.0	31.3	30.6	36.9
1921	31.0	31.7	31.1	29.0	27.3	26.5	25.3	24.4	25.5	25.8	24.3	22.5	27.0
1922	20.1	18.1	16.9	15.8	14.9	14.4	13.9	12.6	9.4	7.1	6.7	6.6	13.0
1923	6.4	5.9	6.0	6.6	6.9	6.4	5.6	5.6	5.7	5.8	6.8	8.1	6.3
1924	9.8	11.6	12.9	14.0	15.1	16.1	16.9	17.9	19.3	20.9	22.6	24.5	16.8
1925	25.9	27.1	29.3	32.6	35.9	40.9	47.2	51.8	55.6	57.7	58.9	60.9	43.7
1926	62.6	64.1	65.1	65.2	65.4	64.7	64.3	65.7	66.9	69.5	72.4	72.4	66.5
1927	72.0	71.8	71.7	71.7	71.6	70.5	69.1	68.4	68.3	68.4	67.7	69.0	70.0
1928	72.1	75.1	77.3	78.1	77.3	77.2	77.1	76.1	74.2	71.6	69.2	67.7	74.5
1929	66.2	64.3	61.3	58.6	59.6	63.0	64.8	64.0	62.8	61.1	60.6	57.5	62.0



SAN FRANCISCO FORECAST CENTER ADOPTS NEW BASE CHART

On January 29 the San Francisco district forecast center adopted a new base chart for use in charting weather reports received twice daily at that forecast center.

The new chart covers the Pacific Ocean from about the one hundred and eightieth meridian of west longitude eastward to and across the North American Continent to the Atlantic Ocean and in a north-south direction from about the thirty-fifth parallel of north latitude to the Arctic Ocean. The use of this base chart marks a great improvement in the facilities for charting weather reports from the Pacific and for the Canadian Northwest, including Alaska.—*A. J. H.*

TORNADO IN WARREN COUNTY, N. C., JANUARY 5, 1931 [2]

By CLARENCE E. SKILLMAN

[Weather Bureau, Raleigh, N. C.]

The storm, described as a large funnel-shaped cloud with a heavy roaring sound, struck first at about 4.35 p. m. on the farm of Mr. J. W. Bishop, 3 miles west of Wise in the northwest part of the county. It destroyed a tobacco barn and packhouse and moved half a mile northeast to where Jim Dunston, colored, lived in a log cabin in a grove of large oak trees. In a course about 100 yards wide it uprooted or twisted off practically every tree in the yard and destroyed completely the house and all outbuildings, killing Jim Dunston and three children outright, one son, 23 years old, dying next day in a hospital. A mile further on it dipped down to destroy a stable and two barns.

Three miles to the northeast, with occasional signs between, it struck in the neighborhood of the Warren County Training School for colored children. Here it struck Locust Grove colored church at the right side of its path, moving it 50 feet north and wrecking it. The colored Christian Church on the left of the path was blown away entirely, except for the floor and foundation. The roof is nowhere to be seen.

At the school there were several frame buildings grouped around a large frame 2-story building in the center. One building on the right, or southeast, side was not materially injured. The main building, directly in the path of the storm, evidently too substantial to be torn down, was moved north off its foundation and twisted beyond repair. Part of the roof on the south side was torn off. A girls' dormitory at the rear of the main building was wrecked, leaving only the floor and part of the partitions standing. About 20 girls were in this building at the time, most of them remaining there. Of those who ran out into the storm, one was struck and killed by a flying piece of timber and another, a teacher, sustained two broken ribs. None of those in the building were injured. A garage and implement shelter in the same line were demolished and the machinery damaged. A large poultry yard lying partly in the path of the storm was about half destroyed and 75 hens were taken up and carried several hundred yards and found dead. Another building at the left was only slightly injured. The top of a large pine standing at the right side of the path of the storm was broken off about 50 feet from the ground and carried 70 yards north and driven 10 feet into the corner of the main frame building.

In all, six people were killed and the property loss is estimated at $35,000.

PERIODIC OSCILLATIONS OF TEMPERATURE

By the late DR. C. EASTON

[Scheveningen, Netherlands]

[Meteorologische Zeitschrift, 1929, p. 171]

Relative to the interesting work of A. Wagner on the yearly oscillation of temperature in Europe in the last decades (Meteorologische Zeitschrift, 45 p. 364), I should like to make the following remarks:

Prof. A. Wagner finds that "the frequency * * * of mild winters in middle Europe in the last decades is such a striking phenomenon that it has been noticed not only by meteorologists, but also by everyone in the uninitiated class who experienced the severe winters at the close of the preceding century." The winters of 1917 (1916–17), 1922, and 1924, however, were certainly not mild; the first-named even ranks with severe winters and it would probably be better to take into consideration only the decade 1906–1916. Prof. A. Wagner compares the years 1886–1895 with the years 1911–1920, that is, the periods in which the temperature oscillation was greatest and least, respectively. As it appears to me, Prof. A. Wagner correctly concludes from his studies that one does not arrive at an explanation of this peculiarity through any secondary cause whatever; he believes that it is rather to be referred to a strengthening of the general circulation "now continuing for decades."

[1] For summary of preceding years, see MONTHLY WEATHER REVIEW, August, 1920, vol. 48, p. 460.

[2] At 8 a. m. seventy-fifth meridian time January 5, 1931, a cyclonic storm was centered over southeastern Tennessee with central pressure down to 29.30 inches; in the next few hours it moved almost due northeast and its center must have passed on the left of Warren County at a probable distance of 50 to 75 miles. Tornadoes in January, although not unknown, are unusual.—*Editor.*

Recent epochs of maximum and minimum: Minimum, 1913.6, 1923.6; maximum, 1917.6, and probably about the middle of 1928.